

AMENDMENTS TO THE SPECIFICATION

Please delete the present Abstract of the Disclosure and replace it with the following new Abstract of the Disclosure.

The output level of vibration of a portion below the spring of a vehicle detected by a sensor, and its frequency is converted to obtain the frequency spectrum of the vibration level. Next, an operation is carried out on at least two vibration levels, at different frequency bands. The computed value is compared with a master curve showing the frequency spectrum of vibration level stored in vibration level storage to estimate the condition of a road surface so as to estimate the running state of the vehicle. Further, the running state of each tire including air pressure is detected from the vibration level of the portion below the spring to estimate the running state of the vehicle. Thereby, a multi-function sensing system is constructed for estimating the condition of a road surface or the running state of the tire with one sensor.